

see what difference there is in 1974 between this area and the main part of the Reserve.

The Short-Eared Owls were again in the valley this last winter, but only one was seen by the writer, although up to a total of six were reported. By mid-April, it was becoming evident that an exceptional number of Pulsatilla plants would bloom, and on the 20th April fifteen blooms and six buds were seen inside the small enclosure, with nineteen blooms and six buds outside, a total of forty-six in all inside the Reserve. Outside the Reserve, about thirty yards above the enclosure, were a further twenty-eight buds and flowers, the first time in five years that this colony has been seen to flower. By 29th April, a careful count of numbers revealed the following situation: fourteen flowers and three buds inside the small enclosure, thirty-one flowers and three buds outside the small enclosure, but inside the Reserve itself, and no fewer than forty-four flowers and two buds in the colony above the Reserve, a fine sight! By this time, Senecio campestris was in bud in small numbers all over the Reserve, and Polygala calcarea also beginning to come out.

By mid-May, P. calcarea was providing a fine display over the whole area, but oddly enough, not on the part which was burned in 1972 as an experiment, although this particular patch had a massive covering of Cowslips (Primula veris) which could be seen from a considerable distance. S. campestris was by now well out, and Orchis ustulata was appearing, three buds being noticed inside the Reserve, and about ten flowering spikes outside. Two plants of Pulsatilla were still in flower, and one bud still to come. By the end of May, the Cowslips were nearly over, and about fifty blooms of O. ustulata were flowering in the Reserve, with about ten to fifteen outside, a good display, but only about a third of last year's record total. Further up the Downs, masses of Field Mouse-Ear (Cerastium arvense) were to be seen on the verges, and plants of Meadow Saxifrage (Saxifraga granulata) were dotted about at intervals on Lowbury Hill.

Mid-June, and a very hot spell, saw the last four or five spikes of O. ustulata, and by this time Frog Orchids (Coeloglossum viride) were to be seen, two coming into bloom, and more coming up. Chalk Milkwort had almost finished flowering, but Dropwort (Filipendula vulgaris) and Candytuft (Iberis amara) were rapidly taking the place of early-flowering species. There was also a plant of Common Gromwell (Lithospermum officinale) in the valley bottom near the Reserve.

By mid-July, Dropwort plants were in full bloom on the Reserve, and twenty-one Frog Orchids were flowering in two colonies; as with the Burnt-tip Orchids, this was only about a third of the number seen last year. Pyramidal Orchids (Anacamptis pyramidalis) were also flowering by this time, and a surprise find was a small colony of Bristly Poppy (Papaver hybridum) near the field gate by the Reserve, although there were many more plants of this species on the edge of a cornfield near Aston Tirrold village.

In mid-August, the scene had changed yet again, this time the Reserve being a mass of Clustered Bellflower (Campanula glomerata) and Felwort (Gentiana amarella). A small patch of Saw-wort (Serratula tinctoria), a predominately acid-soil species, gave

cause for thought as to why it should be growing there, but there was a further colony on the other side of the valley; these two stands indicate that the plant will also grow on chalk as well as acid soils, but seems much less common on the former than the latter, as it appears not to have been recorded to any extent on downland areas in the vicinity of Reading. Also in the vicinity of the Reserve was a plant of Corn Gromwell (Lithospermum arvense), and on the top of the hill by the dewpond opposite Juniper Valley was a small colony of Woolly Thistle (Cirsium eriophorum), eight plants in full bloom. This is also a very local species in this area, as there is little suitable rough pasture left on the Berkshire Downs for it to grow in.

Again, a good year for most plant species, particularly the Pasque Flower, and the mowing certainly seems to be producing results when the flora on the Reserve is compared with that in the rest of the Valley. Bird life was also quite active, a family of Kestrels being noted, two Sparrowhawks being reported, and Stone Curlews being heard or seen near the Fair Mile. Quail appeared not to be so much in evidence as last year, only about two or three being heard over the far side of Lowbury Hill.

As far as Reserve management is concerned, some of the fencing needs to be renewed, and some palings have been obtained from Moor Copse to do the job. The gates also need to be strengthened, and this work will be put in hand this winter. Mowing will be carried out about the usual time next spring, but there is scope for carrying out certain experimental work in controlled areas, which could be of interest, and provide some valuable information on plant activity. It has been noted, for instance, that where mowing has been done regularly, Bromus erectus has been considerably thinned out, and is not nearly such a predominant plant. In these areas, the chalk-downland grasses are re-establishing themselves, anthills are being re-colonised, and the rabbit population is making a noticeable contribution to keeping down the grass during the summer, as compared with areas outside the Reserve. Even inside the small enclosure, where rabbits cannot penetrate, the grass is much longer and ranker by the end of the summer, although this year, nibbling of Pasque Flower heads seemed to be negligible both outside and inside the protected area. Whether this is due to a low population of voles and mice is open to question, but this may be the case, as numbers of Short-Eared Owls in the Valley this year was below average. Rabbit damage appears to have been negligible.

It should be mentioned in conclusion that a Permit is now required to visit the Reserve. These are available from the Berkshire County Secretary; this measure has regrettably had to be introduced because of unauthorised trespass on private land in Juniper Valley, and is in no way intended to stop bona fide visits to the Reserve itself, which is also on private property.

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Fungi of Harpsden Woods
by E. M. Trembath

On October 27th 1973 the Society accepted the invitation of Mrs. V. Vincent of Cray House, Harpsden to hold the annual fungus foray in her beech woods - a new venue for the Society. The weather was perfect and conditions good for foraging. Fungi were plentiful but no rarities were found. The trees, mostly beech but with some mature birch, oak and larch, ensured a reasonable variety of species of fungi. Mrs. Vincent led and Dr. F. B. Hora named the species, explaining the diagnostic features and emphasising how the senses of smell, touch and taste can assist sight in determining the species. He also demonstrated the use of chemicals to dispel doubt where species had similar physical features.

Tea was kindly provided by Mrs. Vincent and her family. Our thanks go to her and to Dr. Hora to whom we owe the success of the outing.

In the following list, the species recorded are grouped according to "Collins Guide to Mushrooms and Toadstools" (M. Lange & F. B. Hora).

ASCOMYCETES

Sphaeriales

Xylaria hypoxylon

BASIDIOMYCETES

Aphyllorphales

Thelephoraceae

Stereum hirsutum

Clavariaceae

Clavaria cristata

Ramaria stricta

Polyporaceae

Piptoporus betulinus

Grifola gigantea

Agaricales

Agaricineae

Hygrophorus eburneus

" *psittacinus*

Tricholoma saponaceum

" *argyraceum*

Armillaria mellea

Clitocybe nebularis

" *dicolor*

" *inversa*

Laccaria amethystina

" *laccata*

Collybia dryophila

" *fusipes*

" *butyracea*

" *maculata*

" *peronata*

Oudemansiella mucida

" *radicata*

Myцена galericulata

" *galopus*

" *pura*

Amanita muscaria

" *fulva*

" *citrina*

" *rubescens*

Agaricineae
continued

Pluteus cervinus
Lepiota rhacodes
" cristata
Agaricus silvicola
Coprinus comatus
" picaceus
" atramentarius
" micaceus
Lacrymaria lacrymabunda
Psathyrella hydrophila
" gracilis
Stropharia squamosa
" aeruginosa
Hypholoma fasciculare
Kuehneromyces capnoides
Conocybe tenera
Inocybe petiginosa
Hebeloma crustuliniforme
Cortinarius cyanopus

Boletineae

Paxillus involutus
Boletus elegans
" chrysenteron
" chrysenteron-varicolor

Russulineae

Russula nigricans
" fellea
" ochroleuca
" cyanoxantha
" mairei
" graminicola (aeruginea)
Lactarius subdulcis
" turpis

Gasteromycetales

Phallus impudicus
Lycoperdon perlatum
Scleroderma aurantium

Note: Amanita solitaria

Amanita solitaria is recorded from a chalk grass slope on the edge of Beechwood, Whitchurch. The record was confirmed by Dr. F. B. Hora.

E. M. Trembath

The Recorder's Report for Botany 1972-73

by B. M. Newman

Records sent in by the following members are gratefully acknowledged:- Mr. P. Andrews (PA); Dr. H. J. M. Bowen (HJMB); Miss L. E. Cobb (LEC); Mrs. M. Hall (MH); Mr. A. Price (AP); Mrs. A. M. Sandels (AMS); Mr. M. Sell (MS); Dr. J. Toothill (JT); Mrs. E. M. Trembath (EMT); Miss J. M. Watson (JMW).

The nomenclature and order are according to the "Flora of the British Isles" by Clapham, Tutin and Warburg. An alien taxon is indicated by an asterisk (*). English names in common use have been given wherever possible and more recently invented names are put in quotation marks.

List of Members' Records

- Phyllitis scolopendrium (L.) Newm. Hart's-tongue Fern
Greathouse Wood, Bradfield. (JT)
- Polystichum aculeatum (L.) Roth 'Hard Shield Fern'
On bank of ditch near Bearwood (HJMB)
- Aconitum anglicum Stapf 'Monkshood'
Road verge, Bradfield (EMT)
- *Delphinium ambiguum L. Larkspur
One white specimen, cornfield near Aston Upthorpe. (MS)
- Ranunculus arvensis L. Corn Buttercup 'Corn Crowfoot'
Thatcham Marsh, 14.7.73 (JFN)
- *Adonis annua L. Pheasant's Eye
30-40 plants in full bloom, some about 2' high, along edges of cornfields near Aston Upthorpe. (MS)
- Papaver hybridum L. Bristly Poppy 'Round Prickly-headed Poppy'
Fair numbers of plants along edges of cornfields near Aston Upthorpe (MS)
- Papaver argemone L. Pale Poppy 'Long Prickly-headed Poppy'
Two or three plants near Aston Upthorpe. (MS)
- Iberis amara L. Wild Candytuft
Clumps on the edges of fields, Upper Basildon; Lodge Hill near Bledlow Ridge, NHS walk (MS)
- Cardamine amara L. 'Large Bitter-cress'
Bank of River, Loddon, Arborfield. (PA)
- Erysimum cheiranthoides L. Treacle Mustard
In a cornfield near the Thames at Mapledurham (HJMB)
- Viola tricolor L. Wild Pansy
On spoil tips, Whiteknights Park (HJMB)
- Hypericum humifusum L. 'Trailing St. John's Wort'
Roadside near Riseley Mill. (JT)
- Hypericum elodes L. 'Marsh St. John's Wort'
Englemere Pool, Ascot, 1.9.73. (R. Lush per LEC)
- Silene noctiflora L. 'Night-flowering Campion'
Thatcham Marsh, 21.7.73. NHS walk. (LEC)

- Cerastium arvense L. 'Field Mouse-ear Chickweed'
Swyncombe Down, 12.5.73, NHS walk (LEC). Masses along the edge of the track forming cushions of white, Fair Mile. (MS)
- Montia fontana L. Blinks
Englemere Pool, Ascot, 1.9.73. (R. Lush per LEC).
- Atriplex hortensis L.
On spoil tips, Whiteknights Park. (HJMB)
- Geranium columbinum L. 'Long-stalked Cranesbill'
Bottom Farm, Ipsden. (HJMB)
- Oxalis corniculata L. Sleeping Beauty 'Procumbent Yellow Sorrel'
Near Thatcham Church (HJMB); abundant in a lawn at Upper Basildon. (MS)
- Oxalis europaea Jord. Upright Oxalis 'Upright Yellow Sorrel'
Garden of 2, Welland Close, Tilehurst. (MS)
- Impatiens capensis Meerburgh Orange Balsam
By the Thames near Pangbourne. (MS)
- Impatiens parviflora DC. 'Small Balsam'
Whiteknights Park between head of lake and Building 3. (JT)
- Sarothamnus scoparius (L.) Wimmer ex Koch Broom
Colonising Smallmead old tip and a roadside verge near Woodcote. (HJMB)
- Medicago sativa L. Lucerne, Alfalfa
Thatcham Marsh, beside the railway. (BMN)
- Melilotus altissima Thuill 'Tall Melilot'
Thatcham Marsh. (BMN)
- Melilotus alba Medic. 'White Melilot'
Several tall plants in Westwood Glen, Tilehurst. (JMW)
- Potentilla argentea L. 'Hoary Cinquefoil'
The habitat near Loddon Bridge in a narrow lane parallel to the railway, has been destroyed during the construction of the Motorway. (AMS)
- Potentilla norvegica L.
One plant near Stitches Green, B. Levy. (HJMB) A few plants found in Mutton Copse after tree felling by Dr. B. Levy. (EMT)
- Sanguisorba officinalis L. 'Great Burnet'
Damp meadow, Sulham. (EMT)
- Rosa rubiginosa L.
Chalk bank near Mapledurham. (HJMB)
- Saxifraga granulata L. 'Meadow Saxifrage'
Clumps at intervals in the grass, Lowbury Hill. (MS)
- Drosera rotundifolia L. Sundew
Englemere Pool, Ascot. 1.9.73. (R. Lush per LEC)
- Drosera intermedia Hayne 'Long-leaved Sundew'
Englemere Pool, Ascot. 1.9.73. (R. Lush per LEC)
- Daphne laureola L. Spurge Laurel
Turville Park (Oxon. part); near Mapledurham. (HJMB)
- Viscum album L. Mistletoe
On Tilia near Englefield Park House, Theale; on Tilia, Crataegus and Populus, north side of The Street and east of Hill Farm, Mortimer. (JT)

- Hydrocotyle vulgaris L. Pennywort, White-rot
Englemere Pool, Ascot. 1.9.73. (R. Lush per LEC)
- Anthriscus caucalis Bieb. 'Bur Chervil'
Still holding on in its old haunt at the base of a tree in the Chestnut Walk in Reading Abbey Ruins, but not exactly flourishing as the plants are very stunted. (AMS)
- Petroselinum segetum (L.) Koch Corn Parsley, 'Corn Caraway'
Cornfields near Aston Upthorpe. (MS)
- Oenanthe crocata L. 'Hemlock Water Dropwort'
Thatcham Marsh, 21.7.73. (LEC)
- Mercurialis annua L. 'Annual Mercury'
In small patch of neglected rough grassland, Basildon. (EMT)
- Euphorbia lathyrus L. Caper Spurge
At least two dozen plants in the gardens of 2, 4 and 6, Mansfield Road, Reading. (AP)
- Polygonum bistorta L. Snake-root, Easter-ledges, 'Bistort'
Thatcham Marsh. 21.7.73. (LEC)
- Parietaria diffusa Mert. & Koch Pellitory-of-the-Wall
Swallowfield Parish Church. (JT)
- Gaultheria shallon Pursh
Englemere Pool, Ascot. 1.9.73. (R. Lush per LEC)
- Monotropa hypopitys L. Yellow Bird's-nest
Three plants in Davenport Wood, Marlow. (MS)
- Vinca major L. Greater Periwinkle
Roadside, Farley Hill. (JT)
- Cynoglossum officinale L. Hound's-tongue
On a chalky rabbit scrape near Mapledurham. (HJMB)
- Calystegia sepium ssp. silvatica (Kit.) Maire.
Hurst. (AMS)
- Cuscuta epithymum (L.) L. 'Common Dodder'
Englemere Pool, Ascot. 1.9.73. (R. Lush per LEC)
- Atropa belladonna L. Dwaile, Deadly Nightshade
Near Bottom Farm, Ipsden (HJMB)
- Hyoscyamus niger L. Henbane
Three plants on Smallmead old tip (HJMB)
- Datura stramonium L. Thorn-apple
Several plants on wasteland between the Chemistry and Plant Sciences Buildings, Whiteknights Park (JT); bank near Sutton's railway bridge, London Road, Reading. (AMS)
- Verbascum phlomoides L.
On spoil heaps in Whiteknights Park. (HJMB)
- Verbascum nigrum L. 'Dark Mullein'
Abundant on chalk bank, Bottom Farm, Ipsden; on spoil heaps in Whiteknights Park. (HJMB)
- Antirrhinum orontium L. Weasel's Snout, Calf's Snout
Large numbers of fine plants in fields near Tadley, some about 1 foot high. (MS)
- Kickxia spuria (L.) Dum. Fluellen
On chalky arable land near Bottom Farm, Ipsden. (HJMB)

- Kickxia elatine (L.) Dum.
On chalky arable land near Bottom Farm, Ipsden. (HJMB)
- Scrophularia aquatica L. Water Figwort, Water Betony
One plant in Henley Road chalk-pit, Playhatch. (MS)
- Digitalis purpurea L. Foxglove
Turville Park (Oxon. part). (HJMB)
- Veronica chamaedrys L. f. alba
Near Mapledurham (HJMB)
- Veronica polita Fr. 'Grey Speedwell'
On chalky arable land near Bottom Farm, Ipsden. (HJMB)
- Melampyrum pratense L. 'Common Cow-wheat'
Nuney Green Woods, 29.7.73. (LEC)
- Odontites verna (Bell.) Dum. 'Red Bartsia'
Thatcham Marsh, 21.7.73. (LEC)
- Orobanche elatior Sutton 'Tall Broomrape'
On Centaurea scabiosa, Bottom Farm, Mapledurham. (EMT)
- Verbena officinalis L. Vervain
Hedge bank near Mapledurham. (HJMB)
- Thymus pulegioides L. 'Larger Wild Thyme'
Lodge Hill near Bledlow Ridge (NHS walk). (MS)
- Acinos arvensis (Lam.) Dandy Basil-thyme
On Lodge Hill near Bledlow Ridge. (MS)
- Legousia hybrida (L.) Delarb. Venus's Looking-glass
Thatcham Marsh, 21.7.73 (LEC). Along edges of cornfields near Aston Upthorpe. (MS)
- Adoxa moschatellina L. Moschatel, Townhall Clock, Five-faced Bishop
Beggar's Bridge, Mortimer. (MH). Clearing in centre of Tilehurst. (JW)
- Valerianella dentata (L.) Poll.
In a cornfield near the Thames at Mapledurham. (HJMB)
- Succisa pratensis Moench Devil's-bit Scabious
Englemere Pool, Ascot. 1.9.73. (R. Lush per LEC)
- Helianthus decapetalus L.
Smallmead old tip. (HJMB)
- Solidago virgaurea L. Golden-rod
Roadside verge, Farley Hill. (PA)
- Zannichellia palustris L. 'Horned Pondweed'
Pond near Pridder's Farm. (HJMB)
- Ruscus aculeatus L. Butcher's Broom
Wood near Riseley Mill. (JT)
- Ornithogalum umbellatum L. Star-of-Bethlehem
Roadside, Farley Hill. (JT)
- Allium ursinum L. Ramsons
Great Chalk Wood. 14.4.73. (LEC) At intervals on both banks of the River Loddon for about two miles downstream from Moor Copse. (JT)
- Galanthus nivalis L. Snowdrop
Well established, Arborfield area. (PA) Greathouse Wood, Bradfield. (JT)

Narcissus pseudonarcissus L. Wild Daffodil

A few plants, Shinfield area. (PA)

Iris foetidissima L.

Gladdon, Stinking Iris

Large colony on the edge of a wood, Upper Basildon. (MS)

Setcreasea purpurea

A purple-leaved house plant from Mexico (member of Commelinaceae) found beneath a tree at Reading Sewage Plant. (HJMB)

Epipactis purpurata Sm.

'Violet Helleborine'

One large plant on roadside, Fence Wood, Hermitage. NHS walk; one plant, Davenport Wood, Marlow. (MS)

Epipactis phyllanthos G. E. Sm. Isle-of-Wight Helleborine

Ten plants in Lambridge Wood near Henley. (MS)

Ophrys apifera Huds.

Bee Orchid

On Lodge Hill, near Bledlow Ridge. (MS)

Miscanthus saccharifer

A large Japanese grass naturalised by gravel pit near Twyford.

A. Munday. (HJMB)

*Hordeum jubatum L.

Frequent on newly sown verge near Woodcote. (HJMB)

Hordelymus europaeus (L.) Harz 'Wood Barley'

Dean Wood, Woodcote. (EMT)

Milium effusum L.

'Wood Millet'

Turville Park (Oxon. part); Wood above Bottom Farm, Ipsden; Hardwick Wood. (HJMB)

The Recorder's Report for Vertebrates 1972-73

by H. H. Carter

PISCES

Phoxinus phoxinus (L.) Minnow. Normally associated with the fast-flowing upper reaches of rivers, but still abundant in the Thames around the Rymer Weir at Caversham Mill in February 1973.

AMPHIBIA

Triturus vulgaris (L.) Smooth Newt. Newts thought to be of this species reported at Parkside Road (BTP) and Bradfield (KP) during the year.

T. helveticus (Raz.) Palmate Newt. Still abundant in the Wokefield Common fishpond after its repair and cleaning, 28.4.73.

Bufo bufo (L.) Toad. Present in pond at Parkside Road (BTP); a large female on Whiteknights Road, 28.4.73 (RHS); fewer seen

dead on roads than in most recent years, one in Emmer Green, 23.3.73 and again 1.10.73.

Rana temporaria L. Frog. Bred in the pond in Prospect Park, whence it was re-introduced to the pond in Parkside Road (BTP); one dead on New Lane Hill, 6.11.72 (ZZK); one in the Wokefield Common fishpond, 11.9.73.

REPTILIA

Anguis fragilis L. Slow Worm. Five in a garden in SW Tilehurst, 24.5.73, one caught by a cat at Woodley, 8.6.73 (RHS).

Lacerta vivipara Jacq. Lizard. Three at the Bell Inn, West Reading, 10.3.73 (DH); several on Wokefield Common, 15.5.73 (RHS).

Natrix natrix (L.) Grass Snake. An overwintered juvenile 25 cm (10 in.) long on a burnt area at Thatcham Marsh, 7.4.73 (ZZK); one at Chestnut Lane, Bearwood, 27.4.73 (RHS); one by a stream on Wokefield Common, 26.4.73; one by an old reservoir at Maidenhead, 11.7.73; one killed in Parkside Road, 20.9.73 (BTP); a juvenile 25-30 cm (10-12 in.) long at Spencers Wood, 1.10.73 (KP).

Vipera berus (L.) Adder. One at Branshill, 27.5.72 (KP); one dead near Englefield Church, 15.6.73 (ZZK).

MAMMALIA

Insectivora

Neomys fodiens Penn. Water Shrew. Remains found in pellets of Strix aluco L. Tawny Owl at Bradfield, autumn 1971 (KP); one dead near Pang at Tidmarsh, 21.9.73 (ZZK).

Sorex araneus L. Shrew. Six records from the Tilehurst area between 14.4.73 and 29.7.73; one at the crossing of Burghfield Road and M4, 26.7.73; one Henley Road gravel pit 25.11.72 (all ZZK); remains in pellets of Strix as above; remains of four in pellet of Tyto alba (Scop.) Barn Owl at nest site by the Pang at Bradfield, 2.8.72 (KP); recorded on many dates in Dogkennel Lane and Harshmoor Lane, Kidmore End, 19.2.73 to 3.5.73; one at Gallowstree Common, 30.6.73.

S. minutus L. Pygmy Shrew. Remains in pellets of Tyto as above; one dead at Chapel Hill, 7.8.73 was partly eaten by hens (ZZK).

Talpa europaea L. Mole. Much fresh working on the Fairmile, 30.12.73; one dead in Sulham Wood, 11.4.73 (both ZZK); scarce in the Cholsey area (Mrs. Whittaker); present at Crowsley but scarce, 20.2.73; in small numbers at Rumerhedge Bottom, 4.3.73; present at Cane End, 17.3.73; abundant at Hinksey near Oxford, 20.2.73.

Erinaceus europaeus L. Hedgehog. Road deaths continue to decrease. Total six dead, two alive, from Tilehurst, Tidmarsh, Beenham, Caversham and Sonning Common.

Chiroptera

Pipistrellus pipistrellus (Schr.) Pipistrelle. Two roosting in an old bottomless nest box at Chapel Hill in August (ZZK).

Carnivora

Vulpes vulpes (L.) Fox. Thirty-eight records received from areas north, south and west of Reading, and foxes also seen frequently in and near Tilehurst, where they are increasing (ZZK), and around Mortimer (Garth Hunt per ZZK); records from previous years show that foxes also occur, though perhaps less abundantly, to the east of us.

Lutra lutra (L.) Otter. A report received at secondhand per KP of five otters seen in the weir pool at Pangbourne in 1972; tracks seen at Hogmoor Bridge, in the same area, by another contact of this observer, were thought to be of this species.

Meles meles (L.) Badger. Detailed observations at a sett at Allen's Hill, and locations of other setts in the Bradfield area received from KP; a new sett in an open field near Henley Road gravel pit (ZZK); sett at Purley (KP); dead badger at St. Peter's Hill during the summer (Mrs. Topham); one killed on Peppard Road at Bishopsland Farm, 29.9.73 (GT).

Mustela erminea (L.) Stoat. One at Stratfield Park, 29.3.73; one on keeper's gibbet at Combe, 29.4.73 (both ZZK); one seen at Bradfield, 30.6.73 and again, 8.7.73 (KP).

M. nivalis (L.) Weasel. One at Smallmead Farm, 26.11.72; one at Midgham Park, 25.6.73; three on keeper's gibbet at Mortimer, 18.7.73 and one alive there next day (all ZZK).

M. vison Schr. Mink. Tracks found in stream south of Bradfield (KP); one at Calcot Lock, 22.7.73 (Mr. Cossins).

Artiodactyla

Cervus elaphus L. Red Deer. Two at Padworth (Mr. McDermid per KP). (This observer is a member of the British Deer Society.)

Dama dama (L.) Fallow Deer. Two deer probably of this species encountered at night in Crosscroft Wood, 24.3.73; two sets of tracks at Christmas Common, Queen's Wood, 29.12.72; two in Lackmore Wood, 31.3.73; one at Combe Wood, 29.4.73; remains in College Wood, 22.7.73 (all ZZK except the first); one disturbed from overgrown marshy ground by the Pang at Bradfield, an unusual habitat for this species, April 1972 (KP).

Muntiacus reevesi Ogilby. Muntjac. One at Burnt Platt, Kingwood Common, 24.3.73 (ZZK); one killed at Cookham, a male, 2.2.73 (Mr. & Mrs. Horton); a male fawn fatally injured at Nettlebed, 11.2.73 (Mr. Morrish); four records from the Bradfield area, 13.1.73 to 25.6.73 (KP); a male killed at Streatley, 10.4.73 (Mr. Lowder); one in beechwood behind Bozdown Farm (EMT); one in Fence Wood, Hermitage (KP).

Capreolus capreolus (L.) Roe Deer. Common in the area south of Mortimer (BB); three seen by a farmer at Greathouse Woods, Bradfield, Jan. 73; a deer thought to be of this species in Fence Wood; a number at Padworth, one of which was shot (all per KP); one at Great Park Copse, Mortimer, 2.7.73 and 10.8.73; three in Butler's Lands Copse, 10.7.73; tracks in Windabout Copse, 26.7.73 (all ZZK); two at Swallowfield, 20.5.73. Clearly this species is moving into our area from the south in considerable numbers.

Lagomorpha

Lepus capensis Pallas. Brown Hare. Twenty-seven records from

most parts of our area (KP, ZZK); maxima thirty at Inkpen, 29.4.73 (KP), thirteen on Bishopsland Farm, 20.3.73, six each at Manor Farm, 9.12.72 and Lowbury Hill, 4.3.73 (KP).

Oryctolagus cuniculus (L.) Rabbit. Abundant around Pangbourne, maxima eighteen at Path Hill and fifteen at Maidenhatch (EMT); greatly reduced at Sulham, maximum three, but eighteen at Hazeley Heath (ZZK); common in Crowsley Park; altogether about twenty records; several cases of myxomatosis observed.

Rodentia

Sciurus carolinensis Gmel. Grey Squirrel. Numerous early in the year, but a crash occurred in July and August in the area south and west of Reading, after which few or none could be found in the usual habitats (ZZK); six records from South Oxfordshire, maximum three at Emmer Green on 7.4.73, so some diminution here also.

Muscardinus avellanarius (L.) Dormouse. Found at Purley in 1971 (KP); one seen on a gatepost at Haughurst Hill, 17.9.73 (ZZK).

Rattus norvegicus Berk. Brown Rat. One dead north of Streatley, 19.11.72 (ZZK); one at View Island, Caversham, 4.10.73.

Apodemus sylvaticus (L.) Wood Mouse. One with four juveniles still almost blind at Mortimer, 23.7.73; about five at Maidenhatch, 3.8.73 (both ZZK); remains of one from three pellets of Strix and at least three from five pellets of Tyto beside the Pang at Bradfield in Autumn 1971; one at the Allen's Hill badger sett, 25.2.73 (all KP); one seen entering a barn at Blount's Court Farm, Sonning Common, 16.6.73; trapped at Sonning Common Primary School (Mrs. Arch).

Micromys minutus (Pallas) Harvest Mouse. A skull thought to be of this species (not seen by the Recorder) in a pellet of Tyto as above; a colony found in wet fields between Henley Road gravel pit and Henley Road by RW and PC; a colony found at Juniper Valley by PJD.

Arvicola amphibius (L.) Water Vole. One at Purley, 11.3.73; one at Theale gravel pit, 17.4.73 and 24.4.73; one on the Foudry Brook at Mortimer, 16.8.73 (all ZZK); two skulls in three pellets of Strix and one in five pellets of Tyto as above; one at View Island, 14.2.73.

Microtus agrestis (L.) Short-tailed Vole. A plague of six hundred to one thousand in a plantation of Thuja plicata Arboretum at Maidenhatch in August (ZZK); the mice had killed most of the young trees by stripping the bark. Three in pellets of Strix and three in pellets of Tyto as above.

Clethrionomys glareolus Schr. Bank Vole. Two in pellets of Strix and one in pellet of Tyto as above.

Contributors

B. Baker; Peter Cuss; P. J. Dillon; David Hill; Basil T. Parsons; Keith Pritchard; R. H. Smith; Geoffrey Taylor; Mrs. E. M. Trembath; Zbigniew & Zdzislaw Karpowicz.

The Recorder's Report for Entomology 1972-73

by B. R. Baker

Order Plecoptera (Stone-flies)

Perlodes microcephala (Pict.)

Two examples of females of this species were discovered at rest on the woodwork of a fisherman's hut by the River Kennet at Woolhampton on 18th April.

Order Odonata (Dragon-flies)

On the occasion of the Society's excursion to Englemere Pond near Ascot on 1st September there was too little sun to induce much dragon-fly flight. However, the following species were seen:-

Aeshna cyanea (Muell.) Southern Aeshna. A single male.

Sympetrum danae (Sulz.) Black Sympetrum. Several examples of both sexes.

Our member Mr. K. I. Thomas has recorded dragon-flies from several localities around Reading and has submitted the following notes:-

Agrion splendens (Harris) Banded Agrion

Purley, 8th June, one male flying around a hedge, not near the river. Hardwick, 21st July, one male. Sulhampstead, 14th July, four males along the Kennet.

Enallagma cyathigerum Charp. Common Blue Damsel-fly

Moor Copse Nature Reserve, 9th June, abundant in the Water Garden, oviposition noted. Still abundant on 23rd June and several on 7th July.

Pyrrosoma nymphula (Sulz.) Large Red Damsel-fly

Moor Copse Nature Reserve, 9th June, two specimens in Water Garden.

Aeshna cyanea (Muell.) Southern Aeshna

Purley, 18th July, one newly emerged specimen on Virginia creeper - not near water.

Libellula depressa L. Broad-bodied Libellula

Moor Copse Nature Reserve, 23rd June, one male in Water Garden.

Order Hemiptera (Plant-bugs, Leaf-hoppers, Aphids, etc.)

Ledra aurita (L.)

Pamber Forest, 12th June, a single nymph beaten from oak. This strange-looking insect has been the subject of several mentions in these yearly reports, but we had not previously noted the creature's capacity for jumping. The 1973 example stayed long enough in the beating tray to ensure identification, and then jumped out of sight!

Our President has supplied the following records for this Order:-

Pentatomidae

Eurydema dominulus (Scop.) A male found among imported figs and submitted to the Museum on 20th February by Mr. Nawell. (This species is on the British list but is very local and not known from

our area.)

Acanthosomidae

Cyphostethus tristriatus (F.) Juniper Bug

A female found in an airing cupboard on 19th October and submitted to the Museum by Miss B. Blackburn. In November 1958 Mr. Arthur Price submitted a specimen to us which had been found on a line of washing. (These 'town' records for C. tristriatus are puzzling; its normal habitat is among juniper bushes and in such places, as for example, Aston Upthorpe Downs, it can be readily beaten. An alternative food-plant seems a possibility.)

Miridae

Megalocoleus pilosus (Schrank).

A female on 10th September (EB); no locality given. (This species is to be found over most of England, associated with tansy.)

Reduviidae

Empicoris vagabundus (L.).

A female found at Sonning Common, 2nd August.

Order Hymenoptera (Bees, Ants, Wasps, Saw-flies and Ichneumon-flies)

Siricidae

Sirex juvencus (L.).

A female specimen of this fine 'wood-wasp' was found in the Thames Conservancy's building on 27th March, and submitted to the Museum by Mr. Guard.

Tenthredinidae

Athalia lugens (Klug) female, 2 College Road, Reading,
17.8.72 (EB)

Dolerus possilensis Cameron female, Nuney Green, 12.5.73 (EB).

Halidamia affinis (Fallen) female, 2 College Road, Reading
3.6.73 (EB)

Aneugmenus coronatus (Klug) female, 2 College Road, Reading,
16.6.73 (EB)

Eutomostethus luteiventris (Klug) female, Wokefield Common,
6.6.73 (HHC)

Priophorus pallipes (Lepeletier) female, Silchester Common,
-9.72 (BTP)

Nematus ribesii (Scop.) male, Moor Copse Nature Reserve,
10.5.73 (HHC).

N. salicis (L.) male, Woolhampton, 25.8.73 (EB)

Ichneumonidae

Probolus culpatorius (L.) female, 2 College Road, Reading,
29.9.72 (EB)

Aethecerus discolor Wesm. female, Wokefield Common, 15.5.73
(HHC)

Centeterus opprimator (Grav.) females, 2 College Road, Reading,
9.10.73 (HHC)

Orotylus mitis (Wesm.) male, 2 College Road, Reading, 18.7.73 (EB)

Platylabus iridipennis (Grav.) male, 2 College Road, Reading, 11.8.73 (EB)

Cratichneumon fugitivus (Grav.) male, 2 College Road, Reading, 31.8.72 (EB)

Barichneumon gemellus (Grav.) male, Goring Heath, 21.7.73 (EB)

Ichneumon extensorius L. female, Wokefield Common, 15.5.73 (HHC)

I. deliratorius L. female, Padworth, 18.9.73 (HHC)

Alomya semiflava Steph. Wokefield Common, 11.9.73 (HHC)

Stilbops vetula (Grav.) 2 College Road, Reading, 16.8.71 (EB)

Cynipidae

Andricus ostreus (Hartig) female, Sonning Common, 22.4.73 (HHC)

Eulophidae

Eulophus pennicornis Nees males, 2 College Road, Reading, 9.8.73 (EB)

Chrysididae

Omalus violaceus (Scop.) female, 2 College Road, Reading, 30.7.73 (EB)

Sphocidae

Passaloecus monilicornis Dahlbom female, Wokefield Common, 12.8.72 (EB)

Psenulus concolor (Dahlbom) female, 2 College Road, Reading, 26.6.73 (EB)

Ceratophorus lethifer (Shuckard) female, Wokefield Common, 3.7.71 (EB)

Coelocrabro ambiguus (Dahlbom) female, Goring Heath, 26.8.72 (EB)

Andrenidae

Andrena trimmerana (Kirby) males, 2 College Road, Reading, 21.4.71 (EB)

A. synadelpha Perkins female, Bishopsland Farm, 4.6.70 (HHC)

Colletidae

Protopis confusa (Nylander) female, Goring Heath, 27.7.71 (HHC)

Megachilidae

Osmia leaiana (Kirby) males, 2 College Road, Reading, 5-9.6.73 (EB)

Order Lepidoptera (Butterflies and Moths)

Early Appearance of Hibernators

26th February Aglais urticae (L.) Small Tortoiseshell, Dreadnought Reach (BTP).

11th March Nymphalis io (L.) Peacock, Caversham.

18th March Gonepteryx rhamni (L.) Brimstone, Caversham.

Notes on Immigrants

Colias croceus (Geoffr. in Four x.) Clouded Yellow Butterfly
Only a single specimen recorded, 10th September, near Streatley (EMT)

Vanessa atalanta (L.) Red Admiral

Not recorded until 22nd July when a single specimen was seen at Pamber Forest. Numbers increased in August and September when on the 8th of the latter month six specimens were observed all at one time feeding on scabious. Last recorded on 3rd October, two specimens at Purley and one at Kidmore End (KIT).

General Note on Vanessid Butterflies

The fine hot summer of 1973 did not seem to encourage a visitation by many immigrant Vanessids but was certainly contributory to a fine autumn showing by some of our resident species. On 15th August Mr. W. A. Smallcombe reported that his buddleia bush at that date had upon it two Red Admirals, twelve Peacocks, two Commas and plenty of Small Tortoiseshells - there were additionally Meadow Browns, Small Meadow Browns, and a Small Copper. Mr. B. T. Parsons has commented upon the broods of Small Tortoiseshell caterpillars he observed in Whiteknights Park and Parkside Lane, and Mr. K. I. Thomas, in supplying us with a detailed list of dates for Vanessid and other butterflies, counted twenty-five Small Tortoiseshells on one border of Sedum at Purley on 7th September.

Notes on Immigrant Moths

Acherontia atropos (L.) Death's Head Hawk-moth

1973 produced the best crop of records from the Reading area since 1950; all the finds refer to either larvae or pupae resulting from Death's Heads which were flying unheralded around Reading, probably in early July:-

17th Aug. Richfield Avenue allotments. Larva per Mr. H. F. Webb.
Moth emerged 30th Sept.

19th Aug. Richfield Avenue allotments. Larva.
Moth emerged 4th Oct.

19th Aug. Richfield Avenue allotments. Larva. Robert Wood.
Moth emerged deformed.

26th Aug. Tokers Green. Larva per Michael Duerden.
Moth emerged deformed.

10th Sept. Binfield Heath. Pupa dug per Mr. H. D. Belcher.
Moth emerged 20th Oct.

13th Sept. Binfield Heath. Two pupae, one damaged, per Mr. H. D. Belcher. Moth emerged 23rd Oct.

17th Sept. Sonning Common. One pupa left at address of HHC.
Moth emerged 27th Oct., wings did not inflate.

The Death's Head hatches from the pupa during the hours of darkness, and in two instances the exact times can be given from those we had under observation, i.e. 01.15 hrs. and 02.10 hrs.

Notes on Resident Lepidoptera

Euchloe cardamines (L.) Orange Tip

Eggs collected last year from Cruciferae on a hedgebank at Caversham were bred through successfully and produced butterflies from 17th April to 1st May. Wild hatchings would not be expected at so early a date and subsequent records were:- Kidmore End, 18th May; Moor

Copse Nature Reserve, 19th May; Harpsden, 21st May and Purley, 25th May (KIT). Parkside Road, Reading, 27th May and 10th June (BTP).

Strymonidia w-album (Knoch) White-letter Hairstreak

14th July, Padworth. A single specimen observed at close quarters in a locality far away from the known areas for this species around Reading.

Thecla betulae (L.) Brown Hairstreak

As a follow-up to the entry placed in last year's Report, a careful search was made near Baughurst and at Pamber Forest for confirmatory evidence of the presence of this species. Having therefore unsuccessfully sought ova, larvae and adults in these places we must now hold reservations upon my mention of the occurrence of betulae in 1972.

Lysandra coridon (Poda) Chalk-hill Blue

Hardwick, 31st July (KIT). The Recorder also observed this species near Whitchurch, Oxon. on 18th August, by which time most of the butterflies seen, males and females, were well past their best condition.

Celastrina argiolus (L.) Holly Blue

18th and 24th May, single examples seen flying at Caversham.

Hamearis lucina L. Duke of Burgundy Fritillary

21st May, Berkshire Downs (RL).

Apatura iris (L.) Purple Emperor

5th June, Pamber Forest, one larva. In the same locality a female was seen on 26th July when the butterfly flew into thick willow cover. BTP used binoculars to good effect and observed a female iris ovipositing among willows on 31st July.

Argynnis paphia (L.) Silver-washed Fritillary

This species had a splendid season at Padworth and Pamber Forest. We have not previously recorded the dark form of the female var. valesina from Padworth but had much pleasure in seeing it there on the 8th, 18th and 21st July. In the Forest, valesina females appeared to be in equal quantity with type females, an event never before witnessed by the Recorder.

Melanargia galathea (L.) Marbled White

26th June, Gatehampton (BTP); 8th and 21st July, Hardwick (KIT); 26th July, Pamber Forest, a new area for this species; only one specimen seen.

Pararge aegeria (L.) Speckled Wood

Many records received:- Purley, 28th August; Sulham Woods, 16th and 30th June, 14th July; Moor Cope Nature Reserve, 19th and 26th May, and 2nd, 9th and 23rd June; 7th and 25th July, 25th August; Hardwick, 29th August; Warren Bank, Ipsden, 23rd April; Warburg Reserve, 12th May; Pamber Forest, 29th June (KIT); Whitchurch Hill, 15th August, (BTP); On 8th September aegeria was observed in Moor Cope feeding upon ripe plums (HGB).

Scotia apiformis (Clerck) Hornet Clearwing Moth

We have had a colony of this striking-looking moth under observation for some years at Battle Hospital, Reading, where a line of twelve

Black Poplars formed a favoured breeding site. By visiting the trees regularly one could assess the clearwing population by counting the empty pupa cases which remained protruding from the lower parts of the trunks. Unfortunately two of the trees came down on 22nd June and the authorities subsequently felled the rest of the row - it remains to be seen whether the Hornet Clearwing can maintain itself in what remains of the poplar stumps. Emergences of the insect in 1973 (17th June to 22nd July inclusive) totalled nine as against twenty-five examples counted in 1972 for the full emergence period.

Aegeria myopaeformis (Borkh.) Red-belted Clearwing

7th June. Dr. Burt reports a single specimen seen on the trunk of an apple tree at 10.20 a.m. in the garden of 2 College Road, Reading.

Asthena albulata (Hufn.) White Waved Carpet

1st June at Padworth. Several specimens noted.

Minoa murinata (Scop.) Drab Carpet

1st June at Padworth. Several specimens noted.

Laothoe populi (L.) Poplar Hawk-moth

20th May at Parkside Road, Reading. Wild male assembled to breed female. (BTP)

Gastropacha quercifolia (L.) Lappet moth

18th May, two larvae found at Cutbush Lane, Earley. Hatched males and one female released there on 30th June. (BTP)

Stauropus fagi L. Lobster moth

22nd May, a female found at rest on a beech trunk at Goring Heath (HHC). 1st September on the occasion of the Society's excursion to Englemere Pond one larva was beaten from oak.

Ptilophora plumigera (Schiff.) Plumed Prominent

10th November. Several examples attracted to mercury vapour light operating in the Chilterns (near Turville and near Fawley). One female flying in at 17.40 was a good record (PC, RW, PH).

Orgyia antiqua (L.) Vapourer moth

Laburnum in Redlands Road again defoliated by larvae of this species, many cocoons noted on a house. (BTP)

Phalaena typica L. Gothic moth

31st August. A single example to light at Moor Copse Nature Reserve.

Brachionycha sphinx (Hufn.) Sprawler

2nd and 3rd November. Several examples to light at Moor Copse Nature Reserve, all specimens were males. Peak flight period midnight until 01.30 hrs. (PC, RW, PH).

Order Coleoptera (Beetles)

Lucanus cervus (L.) Stag Beetle

23rd June one male observed at Moor Copse Nature Reserve (KIT).

Pyrochroa coccinea (L.) Black-headed Cardinal Beetle

19th May six examples noted at base of hazel and on surrounding

vegetation at Moor Copse Nature Reserve. Further specimens observed on 26th May and 31st May in the same locality. (KIT)

Order Diptera (True Flies)

The following detailed list relating to this Order has been submitted to the Recorder by our President, Mr. H. H. Carter, and embodies records made on behalf of Dr. E. Burtt and Mr. Carter himself.

Nematocera

Tipulidae

Tipula peliostigma Schummel, male, 4 College Road (EB)

Limonia inusta (Meigen), female, Wokefield Common, 11.9.73 (HHC)

Limnophila fulvonervosa (Schummel), male, Wokefield Common, 11.9.73. (HHC)

Erioptera griseipennis Meigen, male, 2 College Road (EB)

Ula mollissima Haliday, male, 2 College Road (EB).

This species was not recognised till 1969.

Molophilus flavus Goetghebuer, male, Wokefield Common, 20.7.73 (HHC)

Psychodidae

Pentaneura carnea (Fabricius), female, Sonning Common, 28.5.73 (HHC)

Pilaria scutellata Staeger, male, 2 College Road, 6.4.73 (EB)

Pericoma fuliginosa (Meigen), male, Wokefield Common, 20.7.73 (HHC)

Chironomidae

Procladius olivacea (Meigen), female, Wokefield Common, 25.9.73 (HHC)

Anatopynia trifascipennis (Zetterstedt), male, 2 College Road, 13.5.73 (EB)

Tanytus punctipennis Meigen, female, 2 College Road, 24.8.72 (EB)

Chironomus riparius Meigen, male, 2 College Road, 13.9.72 (EB)

C. nubeculosus Meigen, female, 2 College Road, 11.7.73 (EB)

C. paganus Meigen, male, Aldermaston, 18.8.73 (EB)

Cricotopus bicinctus (Meigen), male, Eldon Square, 26.7.73 (HHC)

Culicidae

Chaoborus crystallinus (Degeer), male, 2 College Road, 29.7.73 (EB)

Brachycera

Rhagionidae

Atherix ipis (Fabricius), Woolhampton, 5.6.71 (BRB)

Lonchopteridae

Lonchoptera furcata (Fallén), female, 2 College Road,
22.12.71 (EB)

Cyclorrhapha

Pipunculidae

Eudorylas jenkinsi Coe, male, 2 College Road, 2.11.72 (EB)
Taken by EB at Checkendon in 1964 but new to Berkshire.

E. obscurus Coe, male, 2 College Road, 1.6.73 (EB)

Syrphidae

Ferdinandea ruficornis (F.), 2 College Road, 25.7.73 (EB)

Trypetidae

Anomoia permunda (Harris), male, 2 College Road, 17.8.72 (EB)

Euribia zoë (Meigen), female, 2 College Road, 29.6.72 (EB)

Agromyzidae

Liriomyza flaveola (Fallén), Wokefield Common, 14.10.72 (EB)

Asteiidae

Asteia amoena Meigen, female, 2 College Road, 10.12.71 (EB).
This species hibernates indoors.

Tachinidae

Anachaetopsis zetterstedti Ringdahl, male, Goring Heath,
26.7.73 (HHC)

Loewia phaeoptera Meigen, female, Goring Heath, 26.7.73 (HHC)

Erycia ferruginea (Meigen), females, 2 College Road, 25.7.73
(EB)

Carcelia tibialis Robineau-Desvoidy, female, 2 College Road,
8.7.73 (EB)

Zenillia roseanae Brauer & Bergenstamm, 2 College Road,
24.7.73 (EB)

Calliphoridae

Sarcophaga offuscata Schiner, male, 2 College Road,
16.7.73 (EB)

Macronychia unguans (Pandellé), female, Goring Heath,
26.7.73 (HHC)

Cynomyia mortuorum (L.), female, 2 College Road, 29.8.72;
male, Wokefield Common, 7.10.72 (both EB). Not new but
always noteworthy.

Morinia nana (Meigen), male, 2 College Road, 1.9.72 (EB)

Stevenia atramentaria Meigen, female, 2 College Road, 18.6.73
(EB)

Muscidae

Azelia cilipes Haliday, male, 2 College Road, 31.8.73 (EB)

Graphomya picta (Zetterstedt), male, Woolhampton, 16.8.73
(HHC). A new county record for Berkshire.

Lophosceles cinereiventris Zetterstedt, females, Goring Heath,
4.11.72 (EB)

We acknowledge our indebtedness to the Director of Reading Museum for allowing inclusion of the relevant records of specimens in the Museum Collection, and also express our best thanks to the following contributors:- Dr. E. Burtt, Mrs. H. G. Baker, Mr. H. H. Carter, Peter Cuss, Philip Harper, Mr. R. Lewington, Mr. B. T. Parsons, Mr. W. A. Smallcombe, Mr. K. I. Thomas, Robert Wood., Mrs E.M. Trembath.

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WEATHER RECORDS IN 1973

by A. E. Moon

The data refer to Reading University Meteorological Station. Since this is a new site, as mentioned in the summary for 1971, no comparison with an average is yet possible. All temperature readings are in Celsius degrees and rainfall measurements in millimetres which is now standard practice. A "rain day" is a day on which rainfall equals or exceeds 0.2 mm. For the designation of frost and ground frost days see Weather Records in 1961, but using all values below 0.0° Celsius.

STATION - READING UNIVERSITY. HEIGHT ABOVE MEAN SEA LEVEL - 215 ft.

		JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	YEAR
MEAN DAILY TEMPERATURES	MAX.	6.9	7.7	11.0	11.6	16.0	20.5	20.4	22.1	19.6	12.9	9.8	8.3	13.9
	MIN.	1.8	0.9	1.5	3.5	7.7	10.0	11.5	12.7	10.6	5.6	2.6	2.1	5.9
	MEAN.	4.3	4.3	6.3	7.5	11.9	15.3	15.9	17.4	15.1	9.3	6.2	5.2	9.9
	RANGE	5.1	6.8	9.5	8.1	8.3	10.5	8.9	9.4	9.0	7.3	7.2	6.2	8.0
	GRASS MIN.	-1.3	-3.7	-4.7	-1.6	3.8	4.9	7.0	8.7	6.3	1.3	-2.1	-2.7	1.4
EXTREME TEMPERATURES	E. MAX.	10.4	11.5	17.1	17.0	24.8	26.2	26.4	29.1	28.7	19.4	15.4	12.4	29.1
	DATE	23	20	23	26	27	16	5	16	5	5	3	4	August 16
	E. MIN.	-4.0	-4.5	-3.2	-2.2	2.0	4.0	5.9	9.4	4.8	0.1	-3.9	-4.5	-4.5
	DATE	1, 19	17	11	10	2, 7	14	24	8	27	28, 30	17	10	February 12 December 17
	E. GRASS MIN.	-8.4	-12.1	-10.4	-10.5	-4.2	-4.3	-0.2	3.4	-1.6	-6.7	-10.5	-11.7	-12.1
	DATE	22	15	11	10	2	14	9	25	27	12	17	1	February 15
DAYS WITH FROST		11	11	12	3	0	0	0	0	0	0	10	10	57
" " GROUND FROST		17	22	26	21	8	6	1	0	3	17	19	21	161
SUNSHINE HOURS	SUM.	34.9	80.9	155.6	165.5	178.6	251.6	191.3	193.3	168.1	101.1	89.9	66.7	1677.5
	% POSS.	13	29	43	40	37	51	39	43	44	31	34	27	37
	DAILY MEAN.	1.13	2.89	5.02	5.52	5.76	8.39	6.17	6.23	5.60	3.26	3.00	2.15	4.59
PRECIPITATION m.m.	AMOUNT	16.6	11.8	9.9	59.3	71.2	51.7	71.1	63.7	45.1	28.4	31.9	52.9	513.6
	RAIN DAYS	12	9	6	16	17	5	8	7	11	9	12	17	129
	MAX. RAIN IN 1 DAY	6.4	6.5	2.2	20.5	13.2	29.4	29.1	25.0	16.6	14.1	9.6	10.0	29.4
	DATE	14	12	24	23	3	19	14	1	20	6	28	7	June 19
LONGEST RUN OF CONSECUTIVE RAIN DAYS		3	3	2	4	6	2	3	5	3	2	4	5	-
LONGEST RUN OF CONSECUTIVE DRY DAYS		8	6	17	6	3	16	8	19	13	9	8	3	-
SNOW OR SLEET DAYS		1	1	1	3	0	0	0	0	0	0	3	0	9
DAYS SNOW LYING		0	0	0	0	0	0	0	0	0	0	0	0	0
VISIBILITY	FOG AT 0900 G.M.T.	4	1	1	0	0	0	0	1	0	4	4	2	17
THUNDERSTORM ACTIVITY	DAYS OF THUNDER	0	0	0	2	2	3	4	2	3	1	1	1	19
	DAYS OF HAIL	0	0	0	0	0	0	0	1	0	0	0	0	1

MONTHLY WEATHER NOTES, 1973

- January This was the driest January since 1964 but the dullest since 1955 and we have to go back to 1964 to find so many sunless days recorded.
- February Sunshine was above average and the month was relatively mild, but the driest since 1965.
- March The driest March since 1961. A drought period of seventeen days ended on 24th and three consecutive completely cloudless days occurred on 21st-23rd. Temperature reached 15.56°C (60°F) for the first time this year on 22nd.
- April A rather cool and sunny month, but the wettest April since 1966. The 23rd was the wettest day of any since June 18th, 1971.
- May Temperature normal but slightly wetter and less sunny than normal.
- June A much better June than 1972 with the average temperature 3.3°C higher than that month. The grass minimum temperature of -4.3°C on 14th was the lowest since at least 1920, when reliable records began at the University. A drought period of sixteen days ended on 19th, which was also the wettest day of any since 10th June 1971.
- July The wettest July since 1968; the 14th was the wettest July day since 22nd, 1967. Heavy falls in short periods included 5.5 mm. in 12 minutes at 22h.30m. (G.M.T.) on 14th, and 3.0 mm. in 6 minutes at 15h. 06m. on 6th, both during thunderstorms.
- August Warmest August since 1959. A drought period of nineteen days ended on 27th. During a thunderstorm on 1st a rainfall of 17.4 mm. fell in 21 minutes at 15h.24m. (G.M.T.).
- September This was the warmest September since 1964, the 5th being the warmest September day since 2nd, 1961. The first autumn ground frost occurred on 12th (-1.0°C).
- October The coolest October since 1964. The 1st was the sunniest October day since 4th, 1957.
- November The driest November since 1964. The first air frost of the winter occurred on 17th and first ice noted on shallow water. Unusually brilliant red sunsets occurred on 8th and 16th.
- December This was the sunniest December since 1967 and the 9th and 31st were the sunniest December days since 2nd, 1961.

ATMOSPHERIC POLLUTION

1973

Measurements of smoke concentration and sulphur dioxide (SO₂) are summarised in the following table. They constitute the results of daily measurements of smoke and SO₂ pollution by air filter and volumetric method respectively from apparatus installed in the Geography Department, Reading University, at Whiteknights.

Smoke Concentration Microgrammes per cu. m.					Sulphur Dioxide (SO ₂) Concentration Microgrammes per cu. m.		
Month	Mean	Highest	Lowest	Mean	Highest	Lowest	
January	40	119 18th	3 14th	96	233 10th	19 14th	
February	33	96 1st	6 6th, 8th 11th, 12th	69	170 15th	31 6th	
March	30	74 10th	2 24th, 31st	78	142 10th	26 12th	
April	12	37 25th	0 1st	65	116 25th	32 1st	
May	10	39 3rd	0 5th	63	146 2nd, 3rd	25 9th	
June	7	14 25th	0 2nd	58	102 8th	25 2nd	
July	7	22 31st	2 15th, 19th- 22nd	52	70 31st	31 15th	
August	15	50 15th	0 4th, 5th, 6th, 7th	62	115 15th	19 5th	
September	18	45 7th, 8th	2 2nd	58	105 15th	26 29th	
October	35	138 30th	2 20th	81	199 26th	32 10th	
November	41	200 21st	2 12th	84	216 20th	33 12th	
December	23	116 31st	2 22nd	59	137 1st	26 16th	
Year	23	200 21st Nov.	0 1st April 5th May 2nd June 4th-7th August	69	233 10th Jan.	19 14th Jan. 5th Aug.	